Paradigm Shift in resource access in academic libraries with special reference to Covid Pandemic - a case study in Maria Engineering College, India

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Abstract:

Libraries are places which are significant for every individual who has the appetite for learning . Academic libraries play an important role in the lives of every research scholar, students and faculty members . This case study explores the services offered by an academic library of an educational institution to its stakeholders during the covid pandemic . It studies the user preference between Print and electronic resources and analyses the effectiveness of print resources and electronic resources during the pandemic.The Article also suggest ways to improve the academic Library System.

Index Terms:

Electronic Resources, Print Resources, Digital Libraries, Academic libraries, Library professionals, E-Journals, Academic libraries during Covid, Libraries during Natural disasters.

I. Introduction

We live in a digital era where the global educational system revolves around technology and innovation. For most of the Technical Institutions and Engineering colleges, understanding the complex relationships between the library services and students, staff, technology, online data base and the user experience is vital, especially when considering the development and availability of technology based devices and services in an era where academic institutions aim at having competitive edge over other institutions. Engineering college students acquire technical knowledge and technical skills from their curriculum and since they are technology savvy, their experience in availing library services assumes significance. Engineering college libraries serve as a main resource centre for gaining knowledge. An outstanding library is expected to have rich varieties of collections and offers smart services to the users which can facilitate the acquisition of informative knowledge or data.

The developments in data communication and technology have modified the user's expectations from the libraries in several ways. The futuristic approach is to build a library with enormous digital collections which fulfills the needs of the end users and a paradigm shift from the traditional library services. To effectively meet the demands of the present day end users, engineering college libraries need to identify and adopt smart practices and benchmarks. The impact of information technology revolution is big on the new generation of users.

A brief Introduction about the place of Study

MARIA College of Engineering and Technology is a Leading Institution run by Ave Maria Educational Trust founded by Dr.G.Russel Raj. The College is affiliated to Anna University, Chennai , Tamil Nadu, India and has completed more than ten years of its dedicated service to the Engineering Graduates. Being one of the top most Leading colleges in Kanyakumari District, the college provides global exposure to the students in the Engineering field. The Mission of the College is to develop Maria College of Engineering in to a "CENTER OF EXCELLENCE" offering Engineer Education to men women at under graduate and post graduate degree level bringing out their total personality, emphasizing ethical values and preparing them to meet the growing challenges of the industry and diverse societal needs of the nation.

The Library at Maria College

The Central Library, which is one of the central support services of Maria College of Engineering and Technology. The library provides electronic access to various full text and bibliographical databases. The Central library is well equipped with modern facilities and resources in the form of RFID, CD-ROM, on-line databases, e-journals, e-books, audio video cassettes, books, journals, project reports etc. A hyperlink from the college website home page will give access to information on library policies, hours, collections and services. The mission of the Central library is to provide information services and access to bibliographical and full text digital and printed resources to support the scholarly and informational needs of the user community. The below mentioned facilities are available at the Library.

- Issue of Books/Journals/Diskettes/CDs/Return/

- Renewal of Books/Journals/Diskettes/CDs

- Return/Renewal of Books/Journals/Diskettes/CDs

- Collection and Remittance of overdue charges, membership deposits and service charges

- Advance booking of books

- Reminders of books overdue

- Issue of Temporary permits for external users

- A help desk for general Enquiries

II. Review of Literature

Schwartz (2000) has opined that digital libraries are complex systems that stretches the capabilities and resources of an institution and offers unparalleled opportunities for better user services. **Simon, E.J (2001),** in his study "Electronic textbooks; A pilot study of students e-reading habit" made an analysis with the e-reading habit of students which says that the students volunteers who used E-Books for a semester were very much pleased with the e-reading experience and wished to continue with the experience in the future as well. **Troll, D.A (2002),** has revealed in his study entitled "Portal: Libraries and the Academy' that the increase in the usage of Internet and availability of electronic resources in abundance and shift in the delivery of information have

created tremendous impact on libraries and expectations of the users Academic libraries are witnessing changes with the changes in learning environment and expectations of library users.

Ali, Naushad (2005), in the study with reference to study of search behaviours by faculties, research scholars and students of universities and research centers titled "The use of Electronic Resources at IIT Delhi Library; found that 78% of the respondents felt that UGC – Infonet e-journals are highly dependable and have dependency value for their research work.

Miller (2007), in his article shaping digital library content describes the obstacles critical to the establishment of digital libraries. He highlights that the selection and purchase of digital content from vendors and in-house would be a significant issue when compared with standard collection management principles.

Kiran Kaur and Diljit Singh (2008), studied the perception of university students on digital library services and integration of digital library elements within the traditional library setup library offered by 5 university libraries. Services in academic libraries were identified through a preliminary study and the digital services offered by 20 university libraries were evaluated. The study revealed that the digital services are very well received by users. E-journals, e-books and online databases were very much popular among the users. The findings of the study are very much helpful for establishing digital or a hybrid library in academic institutions.

Alwarammal, R., Sivaraj, S & Madasamy, R (2009), made a study on the usage of electronic resources with the faculty members and students on the title "Promotion and usage of Electronic Resources by the students and member of faculty in Engineering Colleges in Tamil Nadu, India: An Empirical Study" and found that the 50% of the faculty and students were aware of the availability of E-resources and have actively used it for their academic purposes. The respondents preferred E-journals and E-databases for getting quick information and study materials for their project work, Seminars, research works and for professional development.

Zahid Raza, Khalid Mahmood, Nosheen Fatima Warraich (2019), in Application of linked data technologies in digital libraries: a review of literature emphasizes that need for linked data technologies in Libraries and information centers. The study urges that linked data technologies and Semantic Web have altered the traditional role of the libraries. With the emergence of linked data applications in digital libraries, Web visibility of the libraries has improved and it enables the users to get their information at all times.

III. Research Methodology

3.1. Objectives of the research

- To assess the actual state of the college library with circulation services and facilities
- To ascertain the variety of the sources and study material available in libraries to cater the various study requirement and preference of mode of

Information seeking behavior of respondents whether digital or classical mode ,

▪ To assess the quality and services efficiency of the libraries in context with the availability of electronic resources with the help of Internet.

▪ To assess and determine that how effectively and efficiently libraries are serving the need of its users.

▪ To identify the limitations and failure of services and to recommend ways to improve such services.

▪ Finally to know the extent of effectiveness of library services during the Covid pandemic

3.2 Research Design

The current research is a case study which employs questionnaire method. Questionnaire which is defined as a collection of written or printed questions with an answer choice made to conduct a survey. The information obtained from the sample can then be generalized to an entire population (Kerlinger and Lee, 2000). Survey research is usually a qualitative method that requires standardized information in order to define or describe variables or to study the relationships between variables. Around 200 Questionnaire were distributed to the respondents including faculty members, students, administrative staff and librarians. Only 168 questionnaires were found suitable for Analysis. The questionnaire had closed end questions with a choice as per Likert five points Scale from Strongly Agree to Strongly Disagree and open end questions which seeks the suggestion from the user. The following table (Table3.1) gives a view of the sample size available for the study.

Table 3.1: Size of the Sample			
Sl. No	Respondents	No of Samples	Percentage
1	Teaching Faculty	35	21%
2	Students	120	71%
3	Administrative Staff	10	6%
4	Librarians	3	2%
	Total	168	100%

3.3 Statement of the Problem

1. Inadequate Services in Libraries in Engineering Colleges.

2. Mismatch in Desired Expectations and Actual Services.

3. Perceived Service problems from Users Perspective.

4. There is a perception that Majority of Engineering college students are online users and seek study through online mode.

3.4 Duration of the Study

The study was conducted between April 2021 and September 2021

3.5 Analysis and Data Interpretation

- Data Collection through Questionnaire which forms the Primary Data

- The sampling procedure used for the study is Convenience Sampling.

- SPSS and other relevant statistical tools would be used for Analysis of the collected Data

Table 3.2 Showing the Demographic distribution of Respondents			
Particulars		**Total No. of Respondents**	**Percentage**
Gender	**Male**	73	43%
	Female	95	57%
Total		168	100%
Residence	**Urban Area**	57	34%
	Rural Area	111	66%
Total		168	100%
Age	**Below 25 years**	132	79%
	Above 25 Years	36	21%
Total		168	100%
Marital Status	**Married**	17	10%
	Unmarried	151	90%
Total		168	100%
Name of the Specialization	**B.E - Computer Science and Engineering**	31	18%
	B.E - Civil	18	11%
	B.E - Mechanical	23	14%
	B.E - EEE	26	15%
	B.E - ECE	24	14%
	B.E - Automobile	15	9%
	B.E - Aeronautical	19	11%
	M.E- Computer Science and Engineering	12	7%
Total		168	100%

Table 3.2 shows that the data shows that 57 percentage of the total respondents are female and 43 percentage of respondents are male and 66 percentage of respondents have their residences in rural area and 31 percentage of them have the residences urban area. 79% of the respondents are

below 25 years and 21% of the respondents are above 25 years. 90 percentage of the respondents are unmarried and 10% of the respondents are married. The respondents belong to different engineering specialization , 18 % of the respondents belong to be in Computer Science and Engineering followed by response from B. E in electrical and electronics engineering followed by the respondents from mechanical engineering and electronics and communication engineering, 9 percentage of the respondents are from automobile engineering and 7 percentage of the respondents belong to Masters degree in Computer Science and Engineering.

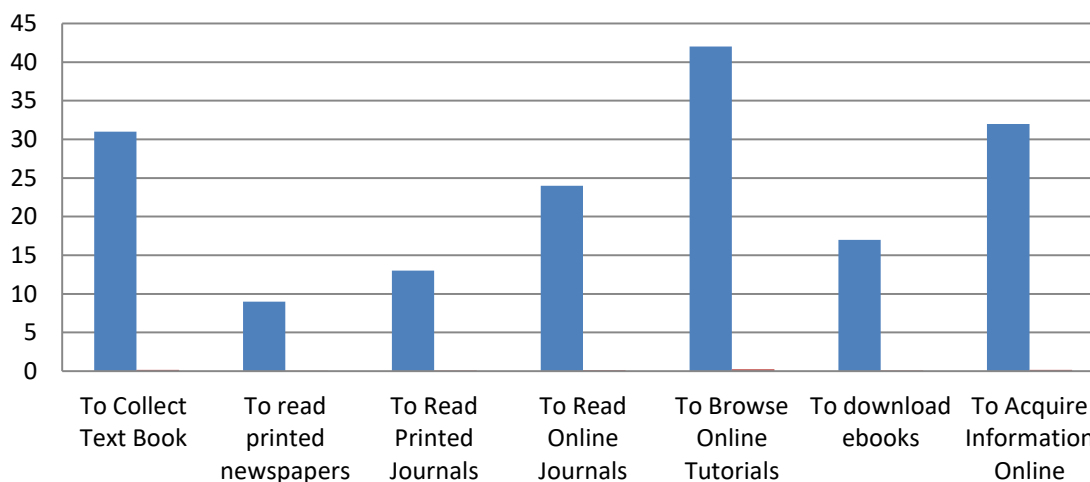| Table 3.3 Purpose of Visit to the Library			
Sl No	**Purpose of Visit to Library**	**Frequency**	**Percentage**
1	**To Collect Text Book**	**31**	**18%**
2	**To read printed newspapers**	**9**	**5%**
3	**To Read Printed Journals**	**13**	**8%**
4	**To Read Online Journals**	**24**	**14%**
5	**To Browse Online Tutorials**	**42**	**25%**
6	**To download eBooks**	**17**	**10%**
7	**To Acquire Information Online**	**32**	**19%**
		168	**100%**

Figure 3.1 Purpose of visit to the Library

Table 3.3 which refers to the purpose of visit to the library shows that 25 percentage of the respondents visit libraries to browse online tutorials, 18 % of the respondents visit library to collect textbooks , 19 % of the respondents visit library to acquire information online , 14 % of the respondents visit the library to read online journals , 10% of the respondents visit library to download eBooks , 8% of the respondents visit libraries to read printed journals and 5% of the respondents visit libraries to read printed newspapers. This shows that majority of the respondents digital library to get information available in the Internet especially they wish to

avail online tutorials and eBooks from internet . They also use internet search engines to acquire

online information which is very much useful for the academic activities.

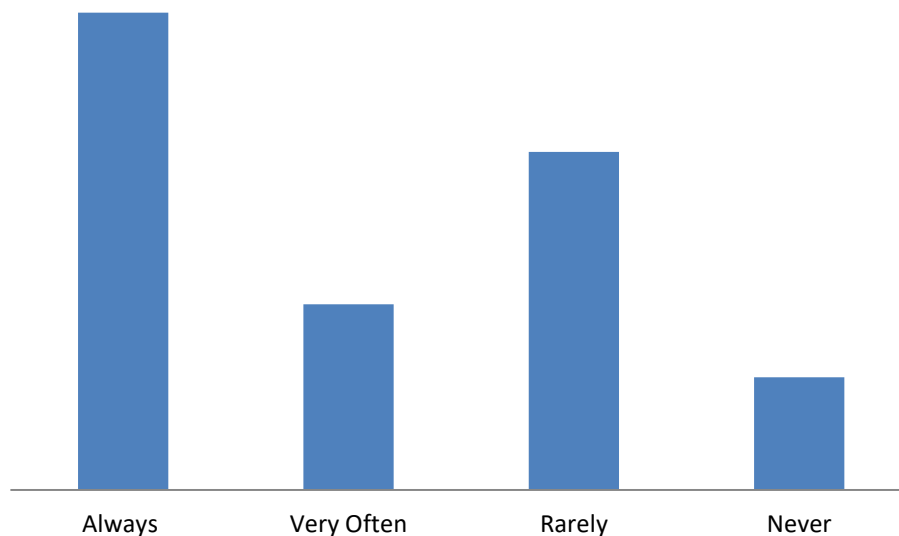| Table 3.4 - Usage of E- Resources		
	Frequency	**Percentage**
Always	72	43%
Very Often	28	17%
Rarely	51	30%
Never	17	10%
	168	100%

Figure 3.2   Usage of E- Resources

Table 3.4 gives a clear picture on the usage of e-resources. 43% respondents say that they always use e-resources for their studies and academic activities, 17 % of the respondents opine that they use e-resources very often , 30% of the respondents say that they use e-resources very rarely and only 10 percentage of the respondents say that they have never used e-resources for their academic activities. This shows that majority of the respondents i.e.; 60% of respondents are widely using e-resources for the academic activities.

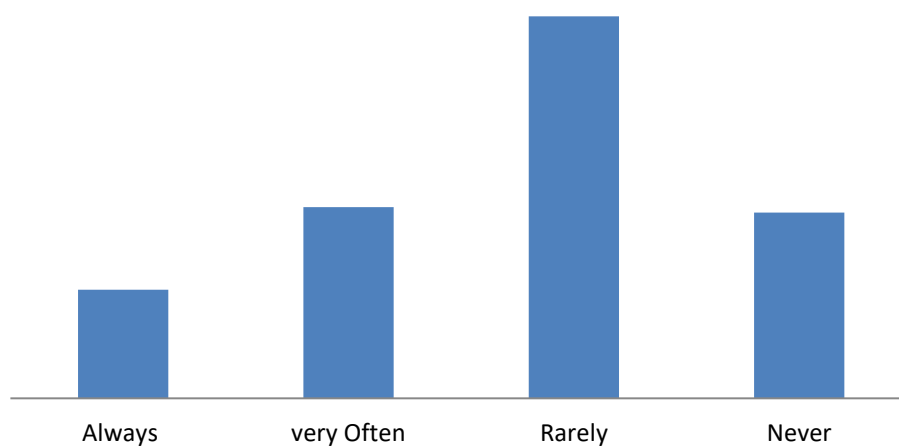| Table 3.5 - Usage of Print Resources		
Measurement parameters	**Frequency**	**Percentage**
Always	**21**	**13%**
very Often	**37**	**22%**
Rarely	**74**	**44%**
Never	**36**	**21%**

Figure 3.3 Usage of Print Resources

Table 3.5 With reference to the usage of print resources , 44 percentage of the respondents say that they rarely use print resources and 22 % of the respondents say that they very often used print resources and 13 % of the respondents say that they always use print resources for the academic activities and 21% of the respondents say that they never use print resources and rely only on online resources for their academic activities.

Table 3.6 - Preference between E- Resources and Print Resources					
		E- Resources		**Print Resources**	
	Parameters	**Frequency**	**Percentage**	**Frequency**	**Percentage**
I	**Research Thesis and Dissertations**	27	16%	141	84%
II	**Technical Project Reports**	122	73%	46	27%
III	**Journals**	98	58%	70	42%
IV	**Reference Books**	113	67%	55	33%
V	**Text Books**	116	69%	52	31%
VI	**Ease of Usage**	138	82%	30	18%
VII	**Availability of Information**	145	86%	23	14%
VIII	**Quickness in Availing Information(Accessibility)**	133	79%	35	21%
IX	**Collection and Sharing of Information**	117	70%	51	30%
X	**Quality of Service Offered**	90	54%	78	46%
XI	**Effectiveness**	126	75%	42	25%
XII	**Assistance from Professionals(Librarians)**	67	40%	101	60%

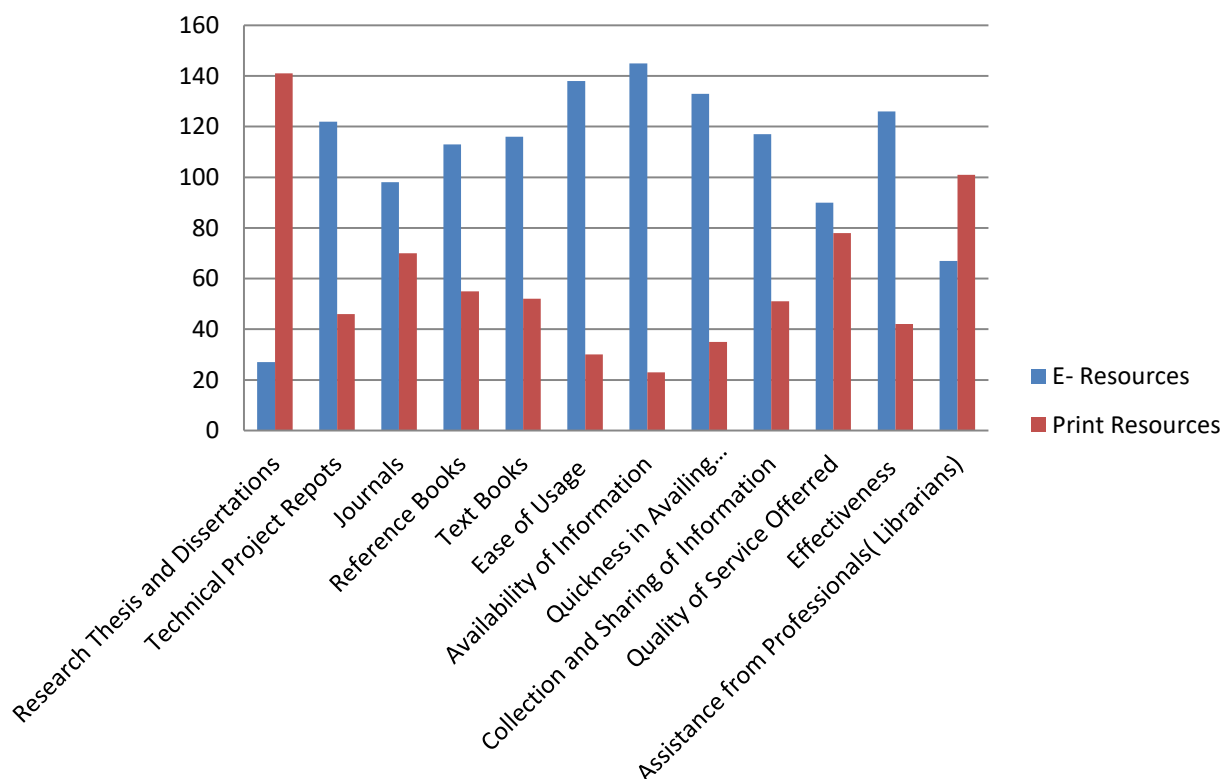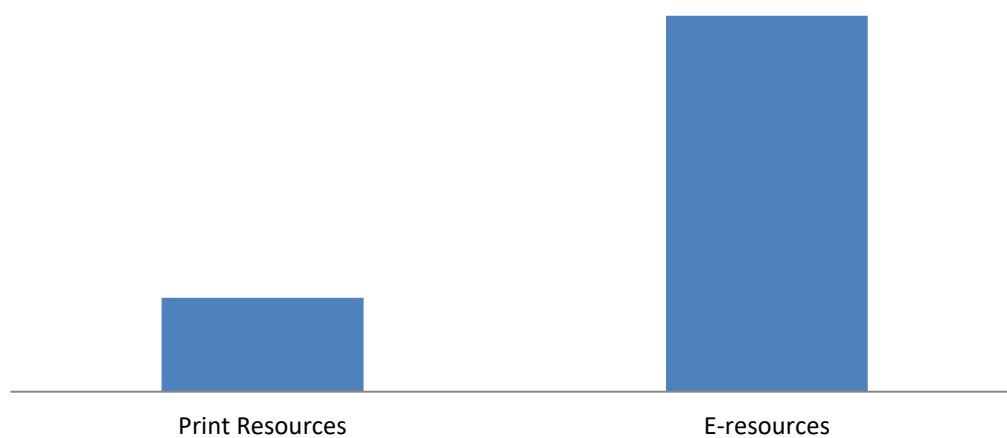## Figure 3.4 - Preference between E- Resources and Print Resources

Table 3.6 the table shows the preference between e-resources and print resources among respondents with regard to different parameters related to academic activities. 84% of the respondents say that they use print resources for their Research thesis and dissertations. 16 % of the respondents say that they use e-resources for their research thesis and dissertation. 73 % of the respondents say that the use e-resources for their technical project reports and 27% of the respondents say that the use resources for the technical project reports. 58 % of the respondents say that they use e-resources for reading journals and 42% of the respondents say that they use print resources to read journals. 67 % of the respondents say that they avail reference books through e-resources when compared to 33 % of the respondents saying that they avail reference books from printed sources. 69 % of the respondents say that they get text books from e-resources and 31 % of the respondents say that they get textbooks only from printed resources. Why discussing the ease of usage, 82 % of respondents feel that it is easy to use e-resources and 18 % of respondents say that they feel comfortable with using print

resources. 86 % of the respondents declare that the availability of information is huge in e-resources and only 14 % of respondents say that print resources have the required information. 79% of the respondents say that it is easy to avail information from E-resources and 21 % of the respondents say that it is easy to avail information in visible print resources. 70% respondents say that it is easy and feasible for the collection and sharing of information is e-resources and only 30% of the respondents say that the collection and sharing information is quite easy in print resources. 54 % of the respondents say that the quality of services offered in e-resources is good and 46% of the respondents say that the quality of services offered is good in print resources. 75% of respondents say that effectiveness of information are good while using e-resources and 25% of the respondents say that the effectiveness of information in print resources are good. 60% of the respondents say that they get very good assistance from professionals ie. librarians while availing print resources and 40% of the respondents declare that they get assistance rendered by librarians in availing e-resources .

Table 3.7 - Preference to Print resources and E-resources during Covid Pandemic		
Preference	Frequency	Percentage
Print Resources	34	20%
E-resources	134	80%
	168	100%

Preference to Print resources and E-resources during Covid Pandemic

Print Resources   E-resources

The above table shows that users prefer E-resources (80%) than Print resources during the pandemic period. This may be due to the fear of transmission of the virus through print materials during circulation.

3.6 Hypothesis Verification

Hypothesis (H1): There is a significant relationship between preference between E-Resources and Print Resources and assistance from Professionals (Librarians).

Results			
Parameters of study	E- Resources	Print Resources	Row Total
Assistance from Professionals (Librarians)	67 (84.00) [3.44]	101 (84.00) [3.44]	168
No Assistance from Professionals (Librarians)	101 (84.00) [3.44]	67 (84.00) [3.44]	168
Column Totals	168	168	336 (Grand Total)

X2 (Degress of freedom (1), N = 168) = 13.7619, p =.000208

Chi Square value is 13.7619

P=.000208

Result = p<.01 hence significant

The Chi Square value indicates there is a significant relationship between preference between E- Resources and Print Resources and assistance from Professionals (Librarians). Hence the hypothesis is accepted.

4.1 Findings

1. Study shows that majority of the respondents (57%) are female.

2. The study reveals that 66 % of the respondents belong to rural area.

3. Study shows that 79 % of the respondents are aged below 25 years.

4. The data shows that 90% of the respondents are unmarried.

5. Data shows that majority of the respondents 18 % belong to B.E in Computer Science and Engineering followed by 15 % from B.E in Electrical and Electronics Engineering.

6. The study shows that 25 % of the respondents visit library to get online tutorials for the academic activities and 19 % of the respondents visit library to acquire information online.

7. 43 % of respondents declare that the use e-resources always academic activities.

8. 13 % of the respondents say that they use print resources always for the academic activities.

9. 84 % of the respondents use print resources for their Research theses and dissertations.

10. 73 % of the respondents prepare e-resources for their technical project reports.

11. 58 % of the respondents declare that they prefer e-resources for reading journals.

12. 67 % of the respondents say that prepare e-resources for getting reference books.

13. 69 % of the respondents say that they prefer e-resources for getting text books.

14. 82 % of the respondents say that or e-resources are easy to use.

15. 86 % of the respondents say that e-resources have more information available in it.

16. 79 % of the respondents say that it is easy to access e-resources to get any information.

17. 70 % of the respondents say that collection and sharing of information is easy in e-resources.

18. 54 % of the respondents say that e-resources offer better quality of information.

19. 75% of the respondents say that the information received from e-resources are effective.

20. 60 % of the respondents say that they get better assistance from a professional that is librarian while availing print resources.

21. The study shows that users highly prefer E-resources (80%) than print resources during the pandemic period.

22. The Chi Square value indicates there is a significant relationship between preference between E- Resources and Print Resources and assistance from Professionals (Librarians).

4.2 Suggestions

1. Libraries should develop a hybrid environment wherein both E- Resources and Print resources are used in an optimum manner.

2. Librarians should be given adequate training on the usage of E- resources so that in turn they may be well versed in guiding the students and research scholars.

3.Reserach Scholars, Faculty and Students should not stick to only with E- resources as many of the printed literature and books which were available in the past years are not available online for reference. They may read printed matters and search online for further updates on the subject matter.

4. Academic institutions should maintain a parity in having both E-resources and Printed resources in their libraries to benefit the students and research scholars.

5. Proper training and awareness should be created among students not only by librarians but also by the subject teachers on the usage of printed and E- resources.

Conclusion

The Study reveals that there is an increase in the usage of E- resources in academic Libraries when compared with the traditional Print resources. Especially during the pandemic situation e-libraries have played a significant role in the academic sphere. Faculty members, research scholars and students have adapted to the e-mode of learning. Hence every academic institution should embrace a hybrid library system wherein equal emphasis should be give to both print and E- resources. Necessary infrastructural changes should be brought in to make effective E-resources accessibility. Library Professionals should be trained on technical skill to handle and facilitate e-resources effectively. Change is inevitable; hence academic libraries should get adapted to the digital mode of functioning and ensure the end user gets optimum benefits and results in "user delight".

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